

## COMPLETED PROJECTS

Following is a list of the principal investigators, or institutions, of projects that have been completed prior to the period covered in this Report. Several of the individuals named are deceased. The titles and affiliations listed were those in effect at the time the work was in progress.

- MARIO D. ACETO, Ph.D.  
*Associate Professor of Pharmacology, Medical College of Virginia, Virginia Commonwealth University, Richmond.*
- CLARENCE M. AGRESS, M.D.  
*Associate Clinical Professor of Medicine, University of California Medical Center, Los Angeles.*
- ANTHONY A. ALBANESE, Ph.D.  
*Director of Laboratories, The Burke Rehabilitation Center, White Plains, NY.*
- ANTHONY P. AMAROSE, Ph.D.  
*Instructor in Obstetrics and Gynecology, The Albany Medical College of Union University, Albany, NY.*
- E. T. ANGELAKOS, M.D., Ph.D.  
*Professor of Physiology, Boston University School of Medicine, Boston, MA.*
- D. MURRAY ANGEVINE, M.D.  
*University of Wisconsin School of Medicine, Madison.*
- JOSEPH C. ARCOS, D.Sc.  
*Professor of Medicine, Tulane University School of Medicine, New Orleans, LA.*
- ALAN K. ARMITAGE, Ph.D.  
*Research Director, Hazleton Laboratories Europe, Harrogate, North Yorkshire, England.*
- MARILYN S. ARNOTT (RASCO), Ph.D.  
*Assistant Biologist and Assistant Professor of Biology, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston.*
- DOMINGO M. AVIADO, M.D.  
*Professor of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia.*
- STEPHEN M. AYRES, M.D.  
*Director, Cardiopulmonary Laboratory, Saint Vincent's Hospital, New York, NY.*
- LESLIE BAER, M.D.  
*Associate Professor of Medicine, Columbia University College of Physicians & Surgeons, New York, NY.*
- OSCAR J. BALCHUM, Ph.D.  
*Hastings Professor of Medicine, University of Southern California School of Medicine, Los Angeles.*
- FREDERIK B. BANG, M.D.  
*Professor and Chairman, Department of Pathobiology, The Johns Hopkins University School of Hygiene and Public Health, Baltimore, MD.*
- A. CLIFFORD BARGER, M.D.  
*Robert Henry Pfeiffer Professor of Physiology, Harvard Medical School, Boston, MA.*
- BRODA O. BARNES, M.D., Ph.D.  
*Professor (Affiliate) of Physiology, Colorado State University, Fort Collins.*
- FREDERICK W. BARNES, JR., M.D.  
*Associate Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*
- T. C. BARNES, D.Sc.  
*Research Scientist, Philadelphia State Hospital, Philadelphia, PA.*
- CARL G. BECKER, M.D.  
*Associate Professor of Pathology, Cornell University Medical College, New York, NY.*
- R. FREDERICK BECKER, Ph.D.  
*Associate Professor of Anatomy and Director, Laboratory of Perinatal Science, Duke University Medical Center, Durham, NC.*

- RALPH S. BECKER, Ph.D.**  
*Professor of Chemistry, University of Houston, Houston, TX.*
- BENJAMIN BELL, M.D.**  
*Director Emeritus, Normative Aging Study, Veterans Administration Outpatient Clinic, Boston, MA.*
- SAMUEL BELLET, M.D.**  
*Director, Division of Cardiology, Philadelphia General Hospital, Philadelphia, PA.*
- BARUJ BENACERRAF, M.D.**  
*Fabyan Professor and Chairman, Department of Pathology, Harvard Medical School, Boston, MA.*
- WILLIAM F. BENEDICT, M.D.**  
*Assistant Professor of Pediatrics, University of Southern California School of Medicine, Division of Hematology and Medical Genetics, Children's Hospital of Los Angeles, Los Angeles.*
- BARBARA J. van den BERG, M.D.**  
*Research Pediatrician, Adjunct Professor in Biostatistics, University of California School of Public Health, Oakland.*
- JOHN A. BEVAN, M.D.**  
*Professor of Pharmacology, University of California School of Medicine, Los Angeles.*
- BUDHDEV BHAGAT, Ph.D.**  
*Professor of Physiology, Saint Louis University School of Medicine, St. Louis, MO.*
- CESARE BIANCIFIORI, M.D.**  
*Division of Cancer Research, University of Perugia, Perugia, Italy.*
- HYLAN A. BICKERMAN, M.D.,**  
*Assistant Professor of Medicine, and*  
**ALVAN L. BARACH, M.D.,** *Consultant in Medicine, Columbia University College of Physicians & Surgeons, Goldwater Memorial Hospital, New York, NY.*
- BIO-RESEARCH CONSULTANTS, INC.,**  
*Cambridge, MA.*
- BIO-RESEARCH INSTITUTE, INC.**  
*Cambridge, MA.*
- DEBAJIT K. BISWAS, Ph.D., D.Sc.**  
*Associate Professor of Oral Biology, Laboratory of Pharmacology, Harvard School of Dental Medicine, Boston, MA.*
- IRA B. BLACK, M.D.**  
*Professor and Chief, Division of Developmental Neurology, Cornell University Medical College, New York, NY.*
- FRED G. BOCK, Ph.D.**  
*Associate Cancer Research Scientist, Biological Station, Roswell Park Memorial Institute, Springville, NY.*
- GUENTHER BODEN, M.D.**  
*Associate Professor of Medicine, Assistant Director, General Clinical Research Center, Temple University Health Sciences Center, Philadelphia, PA.*
- HERMAN V. BOENIG, Ph.D.**  
*Head, Department of Chemistry and Biochemistry, Spindletop Research Center, Lexington, KY.*
- JAMES F. BONNER, Ph.D.**  
*Professor of Biology, California Institute of Technology, Pasadena.*
- WALTER M. BOOKER, Ph.D.**  
*Professor and Head, Department of Pharmacology, Howard University, Washington, DC.*
- FRANÇOIS M. BOOYSE, Ph.D.**  
*Senior Investigator, Michael Reese Research Foundation, Chicago, IL.*
- RAYMOND BOSSE, Ph.D.**  
*Associate Director, Normative Aging Study, Veterans Administration Outpatient Clinic, Boston, MA.*
- TOM G. BOWERY, Ph.D.**  
*Research Professor, Pesticide Residue Laboratory, North Carolina State College, Raleigh.*
- J. MARK BRAUGHLER, Ph.D.**  
*Assistant Professor of Pharmacology, Northeastern Ohio Universities College of Medicine, Rootstown.*
- EDWARD BRESNICK, Ph.D.**  
*Professor and Chairman, Department of Biochemistry, The University of Vermont College of Medicine, Burlington*

- GEOFFREY L. BRINKMAN, M.D.  
*Associate Professor of Medicine, Wayne State University School of Medicine, Detroit, MI.*
- ELROY T. CANTRELL, Ph.D.  
*Chairman, Department of Pharmacology, Texas College of Osteopathic Medicine, North Texas State University, Denton.*
- ROBERT E. BROOKS, Ph.D.  
*Associate Professor of Pathology, University of Oregon Medical School, Portland.*
- WILLIAM H. CARNES, M.D.  
*University of Utah College of Medicine, Salt Lake City.*
- BARBARA B. BROWN, Ph.D.  
*Chief, Experimental Psychiatry, Veterans Administration Hospital, Sepulveda, CA.*
- MARCUS N. CARROLL, JR., Ph.D.  
*Chief, Division of Pharmacology, The Brookdale Hospital Center, Brooklyn, NY.*
- RAYMOND R. BROWN, Ph.D.  
*Professor of Clinical Oncology, University of Wisconsin Medical School, Madison.*
- WILLIAM A. CARTER, M.D.  
*Professor of Hematology and Medical Oncology, Hahnemann Medical College, Philadelphia, PA.*
- JOSEF BROZEK, Ph.D.  
*Professor and Chairman, Department of Psychology, Lehigh University, Bethlehem, PA.*
- WILLIAM ALVIN CARTER, M.D.  
*Assistant Professor of Medicine and Microbiology, The Johns Hopkins University School of Medicine, Baltimore, MD.*
- REBECCA BRYSON, Ph.D.  
*Associate Professor of Psychology, San Diego State University, San Diego, CA.*
- ALBERT CASTRO, Ph.D.  
*Director, Hormone Research Laboratory; Professor of Pathology and Medicine, University of Miami School of Medicine, Miami, FL.*
- SUE BUCKINGHAM, M.D.  
*Assistant Professor of Pediatrics, Columbia University College of Physicians & Surgeons, New York, NY.*
- LEOPOLD R. CERECEDO, Ph.D.  
*Professor of Biochemistry and Nutrition, University of Puerto Rico School of Medicine, San Juan.*
- A. SONIA BUIST, M.D.  
*Associate Professor of Medicine and Physiology, University of Oregon Health Sciences Center, Portland.*
- JACK CHALON, M.D.  
*Associate Professor of Anesthesiology, New York University Medical Center, New York.*
- BENJAMIN BURROWS, M.D.  
*Associate Professor of Medicine, University of Chicago, Chicago, IL.*
- FRANCIS C. CHAO, M.D., Ph.D.  
*Senior Investigator, Center for Blood Research, Boston, MA.*
- E. M. BUTT, M.D.  
*Chief Pathologist, Los Angeles County General Hospital, Los Angeles, CA.*
- CHILDREN'S HOSPITAL OF LOS ANGELES  
*Los Angeles, CA.*
- RICHARD U. BYERRUM, Ph.D.  
*Professor of Chemistry, Michigan State University, East Lansing*
- JAN F. CHLEBOWSKI, Ph.D.  
*Assistant Professor of Biochemistry, Medical College of Virginia, Richmond.*
- SISTER M. EMILY CAHILL, Ph.D.  
*Chairman, Department of Chemistry, Regis College, Weston, MA.*
- SANFORD CHODOSH, M.D.  
*Assistant Professor of Medicine, Tufts University School of Medicine, Boston, MA.*
- BRUCE F. CAMERON, M.D., Ph.D.  
*Howard Hughes Institute, University of Miami School of Medicine, Miami, FL.*

- NAITER M. CHOPRA, Ph.D.  
*Professor of Chemistry, North Carolina Agricultural and Technical State University, Greensboro.*
- WILLIAM G. CLARK, Ph.D.  
*Director, Psychopharmacology Research Laboratory, Veterans Administration Hospital, Sepulveda, CA.*
- HANS T. CLARKE, D.Sc.  
*Professor of Biochemistry, Columbia University College of Physicians & Surgeons, New York, NY.*
- JAY D. COFFMAN, M.D.  
*Section Head, Peripheral Vascular Department, University Hospital, Boston, MA.*
- ALLEN B. COHEN, M.D., Ph.D.  
*Associate Professor of Medicine; Chief, Pulmonary Section, Temple University Health Sciences Center, Philadelphia, PA.*
- BERNICE H. COHEN, Ph.D.  
*Professor and Director, Human Genetics/Genetic Epidemiology Program, The Johns Hopkins University School of Hygiene and Public Health, Baltimore, MD.*
- DANIEL COHEN, D.V.M., M.P.H.  
*Assistant Professor of Veterinary Epidemiology and Public Health, University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA.*
- ALLAN C. COLLINS, Ph.D.  
*Associate Professor of Pharmacology, Institute for Behavioral Genetics, University of Colorado, Boulder.*
- JULIUS H. COMROE, JR., M.D.  
*Director, Cardiovascular Research Institute, University of California Medical Center, San Francisco.*
- DEAN M. CONNORS, M.D.  
*Associate Director, Department of Laboratory Medicine, St. Mary's Hospital, Madison, WI.*
- PHILIP COOPER, M.D.  
*Clinical Professor of Surgery and Director, Surgical Laboratory of Cellular Physiology, Albert Einstein College of Medicine of Yeshiva University; Chief, Surgical Service, Veterans Administration Hospital, The Bronx, NY.*
- PAUL T. COSTA, JR., Ph.D.  
*Associate Professor of Psychology, University of Massachusetts at Boston, Dorchester.*
- JOHN E. CRAIGHEAD, M.D.  
*Professor of Pathology, University of Vermont College of Medicine, Burlington.*
- ROBERT L. CRAIN, Ph.D.  
*Assistant Professor of Sociology, University of Chicago, Chicago, IL.*
- IRVING P. CRAWFORD, M.D.  
*Professor and Chairman, Department of Microbiology, University of Iowa College of Medicine, Iowa City.*
- T. TIMOTHY CROCKER, M.D.  
*Professor of Medicine, University of California, College of Medicine, Irvine.*
- CARROLL E. CROSS, M.D.  
*Associate Professor of Medicine and Human Physiology; Director, Section of Pulmonary Medicine, University of California School of Medicine, Davis.*
- CECIL E. CROSS  
*Research Department, St. Joseph's Hospital, Burbank, CA.*
- DAVID W. CRUMPACKER, Ph.D.  
*Professor and Chairman, Department of Environmental, Population and Organismic Biology, University of Colorado, Boulder.*
- ALBERT DAMON, M.D., Ph.D.  
*Lecturer on Anthropology; Research Associate in Medical Anthropology, Peabody Museum, Harvard University, Cambridge, MA.*
- THOMAS R. DAWBER, M.D.  
*Associate Professor of Medicine, Boston University School of Medicine, Boston, MA.*
- R. F. DAWSON, Ph.D.  
*Professor of Botany, Columbia University, New York.*
- JOHN P. DELANEY, M.D., Ph.D.  
*Associate Professor of Surgery, University of Minnesota, Minneapolis.*
- ANDREW S. DIBNER, Ph.D.  
*Executive, Psycho-Research, The Age Center of New England, Inc., Boston, MA.*

- EDWARD F. DOMINO, M.D.  
*Professor of Pharmacology, University of Michigan, Ann Arbor.*
- RALPH L. DORFMAN, Ph.D.  
*Director of Laboratories, Worcester Foundation for Experimental Biology, Shrewsbury, MA.*
- H. FRED DOWNEY, Ph.D.  
*Assistant Professor of Physiology, University of Texas Health Science Center at Dallas; Director, Cardiovascular Research, Cardiopulmonary Institute, Methodist Hospital of Dallas.*
- JAMES J. DYAR, Ph.D.  
*Assistant Professor of Biology, Bellarmine College, Louisville, KY.*
- RICHARD H. EARLE, M.D.  
*Chief, Pulmonary Function Laboratory; Assistant Professor of Medicine, University of Chicago, Chicago, IL.*
- ROBERT ECHT, Ph.D.  
*Professor of Anatomy, Michigan State University, East Lansing.*
- JOHN W. ECKSTEIN, M.D.  
*Assistant Professor of Internal Medicine, State University of Iowa College of Medicine, Iowa City.*
- BERTRAM EICHEL, D.D.S.  
*Director, Institute of Stomatological Research, Science Resources Foundation, Watertown, MA.*
- HYMAN ENGELBERG, M.D.  
*Attending Physician, Cedars of Lebanon Hospital, Los Angeles, CA.*
- CARLTON K. ERICKSON, Ph.D.  
*Professor of Pharmacology, The University of Texas College of Pharmacy, Austin.*
- HENRY J. ESBER, Ph.D.  
*Research Immunologist, Mason Research Institute, Worcester, MA.*
- WALTER B. ESSMAN, M.D., Ph.D.,  
*Professor of Psychology and Biochemistry, Queens College of the City University of New York, Flushing, NY.*
- JOHN R. ESTERLY, M.D.  
*Associate Professor of Pathology, University of Chicago Pritzker School of Medicine, Chicago, IL.*
- HUGH E. EVANS, M.D.  
*Director, Department of Pediatrics, Jewish Hospital and Medical Center of Brooklyn, Brooklyn, NY.*
- HANS J. EYSENCK, Ph.D., D.Sc.  
*Professor of Psychology, Institute of Psychiatry, University of London, London, England.*
- HANS L. FALK, Ph.D.  
*Adjunct Associate Professor of Pathology, University of Southern California School of Medicine, Los Angeles.*
- DANA L. FARNSWORTH, M.D.  
*Henry K. Oliver Professor of Hygiene and Director, University Health Services, Harvard University, Cambridge, MA.*
- GAD FEINSTEIN, Ph.D.  
*Senior Lecturer in Biochemistry, The George S. Wise Center of Life Sciences, Tel Aviv University, Tel Aviv, Israel.*
- JOSEPH D. FELDMAN, M.D.  
*Immunopathologist, Scripps Clinic and Research Foundation, La Jolla, CA.*
- RICHARD FENTON, Ph.D.  
*Instructor in Physiology, University of Massachusetts School of Medicine, Worcester.*
- FRANK C. FERGUSON, JR., M.D.  
*Chairman, Department of Pharmacology, The Albany Medical College of Union University, Albany, NY.*
- THOMAS H. FINLAY, Ph.D.  
*Associate Professor of Obstetrics and Gynecology, New York University Medical Center, New York.*
- THEODORE N. FINLEY, M.D.  
*Director, Pulmonary Research Laboratory, Mount Zion Hospital, San Francisco, CA.*
- WILLIAM I. FISHBEIN, M.D.  
*Chief of Epidemiology, Chicago Board of Health, Chicago, IL.*

- EDWIN R. FISHER, M.D.  
*Director of Laboratories, Shadyside Hospital; Professor of Pathology, University of Pittsburgh School of Medicine, Pittsburgh, PA.*
- RUSSELL S. FISHER, M.D.  
*University of Maryland School of Medicine, Baltimore.*
- WILLIAM H. FISHMAN, Ph.D.  
*President, La Jolla Cancer Research Foundation, La Jolla, CA.*
- BIRGITTA FLODERUS-MYRRHED, Ph.D.  
*Assistant Professor of Environmental Hygiene, The Karolinska Institute, Stockholm, Sweden.*
- JACK W. FRANKEL, Ph.D.  
*Consultant in Medical Research, Veterans Administration Medical Center, Bay Pines, FL.*
- B. L. FREEDLANDER, M.D.  
*Director of Cancer Research, Mount Zion Hospital and Medical Center, San Francisco, CA.*
- ALLAN P. FREEDMAN, M.D.  
*Assistant Professor of Medicine, Hahnemann Medical College, Philadelphia, PA.*
- AARON E. FREEMAN, Ph.D.  
*Staff Scientist, California Biomedical Research Foundation, La Jolla, CA.*
- FREDERIC A. FRENCH, A.B.  
*Director of Cancer Chemotherapy Research, Mount Zion Hospital and Medical Center, San Francisco, CA.*
- JACK FREUND, M.D.  
*Assistant Professor of Pharmacology, Medical College of Virginia, Richmond.*
- LARS FRIBERG, M.D.  
*Professor and Chairman, Department of Environmental Hygiene, The Karolinska Institute, Stockholm, Sweden.*
- GILBERT H. FRIEDEL, M.D.  
*Chief of Pathology, St. Vincent's Hospital, Worcester, MA.*
- GARY D. FRIEDMAN, M.D.  
*Assistant Director, Department of Medical Methods Research, Kaiser Foundation Research Institute, Oakland, CA.*
- H. HUGH FUDENBERG, M.D.  
*Professor of Medicine, University of California Medical Center, San Francisco; Professor of Bacteriology and Immunology, University of California, Berkeley.*
- ARTHUR FURST, Ph.D.  
*Director, Institute of Chemical Biology, University of San Francisco, San Francisco, CA.*
- MORTON GALDSTON, M.D.  
*Associate Professor of Medicine, New York University Medical Center, New York.*
- MURRAY B. GARDNER, M.D.  
*Associate Professor of Pathology, University of Southern California School of Medicine, Los Angeles.*
- MICHAEL C. GEOKAS, M.D., Ph.D.  
*Professor and Vice-Chairman, Department of Medicine, University of California School of Medicine, Davis.*
- TERESA GESSNER, Ph.D.  
*Associate Cancer Research Scientist, Health Research, Inc., Roswell Park Division, Buffalo, NY.*
- GEORGE O. GEY, M.D.  
*Director, Finney-Howell Cancer Research Laboratory; Associate Professor of Surgery, The Johns Hopkins University School of Medicine, Baltimore, MD.*
- RONALD W. GILLETTE, Ph.D.  
*Director, Basic Science Research Unit, Cancer Center of Hawaii, University of Hawaii at Manoa, Honolulu.*
- GERALD J. GLEICH, M.D.  
*Consultant in Medicine, Research Laboratory for Allergic Diseases, Mayo Clinic and Foundation; Professor of Internal Medicine and Immunology, Mayo Medical School, Rochester, MN.*
- THOMAS M. GOCKE, M.D.  
*Associate Professor of Preventive Medicine and Community Health, Seton Hall College of Medicine and Dentistry, Jersey City, NJ.*